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10/018316

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Newport
South Wales
NP10 8QQ

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Dated 11TH August 2000

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P01/7700 0.00 - 9914848.8

Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road
Newport
Gwent NP9 1RH

1. Your reference

SHAPE CONFORMING SURFACE

2. Patent application number
(The Patent Office will fill in this part)

24 JUN 1999

9914848.8

3. Full name, address and postcode of the or of each applicant *(underline all surnames)*

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Patents ADP number *(if you know it)*

7549637001

If the applicant is a corporate body, give the country/state of its incorporation

4. Title of the invention

SHAPE CONFORMING SURFACE.

5. Name of your agent *(if you have one)*

"Address for service" in the United Kingdom to which all correspondence should be sent *(including the postcode)*

Patents ADP number *(if you know it)*

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and *(if you know it)* the or each application number

Country	Priority application number *(if you know it)*	Date of filing *(day / month / year)*

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application	Date of filing *(day / month / year)*

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? *(Answer 'Yes' if:*

a) any applicant named in part 3 is not an inventor, or
b) there is an inventor who is not named as an applicant, or
c) any named applicant is a corporate body.
See note (d))

1. SHAPE CONFORMING SURFACE

This invention relates to a shape conforming surface.

There are in use many surface coverings, there are however some applications which require conformity to curves which are normally fabricated in planks of stressed wood.
A typical example of this is the teak planked deck of a yacht.
These surfaces have to be of good non slip character, at least fairly unaffected by water and look attractive. Wood such as teak has been used for many years but in many ways is impractical and of relatively short lifespan.
Curved wooden surfaces involve considerable stressing, preparation, fixing with screws , use of sealing compound and regular maintenance especially scrubbing, oiling and varnishing.
The new look of a teak deck is lost within weeks and the whole deck requires major work or replacement in four to six years on average.

According to the present invention there is provided a shape conforming surface comprising lengths of differing cross section of a specifically formulated plastic material.
These lengths connect edge to edge in various combinations to form collectively the size and shape of the required surface. The individual planks and ,or, caulking strips(normally jointing compound on wooden decking) are malleable, becoming more so with an increase in temperature. The new shapes or curves taken up by the planks or caulking strips become a stress free feature of these planks or caulking strips unless re-adjustment is necessary aided with the use of applied heat(hot air gun, hot water or radiant heat.).
The colours of the described planks and strips can be changed easily in the manufacturing extrusion process.
The surface as assembled, complete or in sections is fixed to the recipient surface with adhesive and provided is a suitable undersurface to the invention to facilitate this process.
No screws or bolts and the associated holes are required because captive springing is not a problem as is normally the case with wooden planking made to conform with curvature.

The present invention lends itself to various mechanical and manual abrasive techniques such as belt sanding (within specific conditions) to provide a surface effect extremely similar to grained wood both in texture and appearance.

Some of the advantages of the present invention over wood are that it is completely waterproof, easily washable to look like new every time(even jet washable which is damaging to wood grain), extremely non slip, extremely stain resistant and relatively easy to assemble.
One of the main advantages of the present invention is that it is not a laminate and can be sanded repeatedly.

A specific embodiment of the invention will now be described by way of example with reference to accompanying drawings in which:-

FIG 1. Shows in perspective an example of two of the plank sections with a caulking strip

FIG 2. Shows a section of planking assuming a curved shape

FIG 3. Shows examples of cross sections of typical components

FIG 4. Illustrates a belt sanding operation

FIG 5.Illustrates an assembled section of the surface in plan view.

FIG 6.Shows an alternative texturing technique.

FIG 7.Shows a way of laying the surface.

Referring to the drawings
FIG 1. shows the surface with planks (1) and (2) with intermediary caulking strip (3) and an example of interlocking male and female features(4). An example of under side profile is shown (5).
With application of heat, an example of a hot air gun or hair dryer is shown(7) a section of planking (6) can be readily curved to form, as seen in FIG 2.
Examples of extrusion cross sections are shown in FIG 3. ((1),(3),(8)&(9)) Different cross sections are used in different types of joints. An example would be use of a piece of (8) in joint (15) as shown in FIG 5. or at a curved border type plank (9) at joint (16).FIG 5.
An application of a beltsander(10), is shown in FIG 4 in which the angle(11), speed of rotation(12),coarseness of grit,and direction of stroke(13) are important to react with the formulation of the plastic surface to produce the unique grain effect.
Angular strokes across the surface will also produce individual effects as shown in FIG (6)with a powerfile(17) The various sanding techniques produce a "designer" effect.
The assembled surface is glued and layed as in FIG 7 rolling back onto the recipient surface thus excluding air traps. Cutting and trimming is readily achieved with the use of a sharp knife for example.

FIG 1.

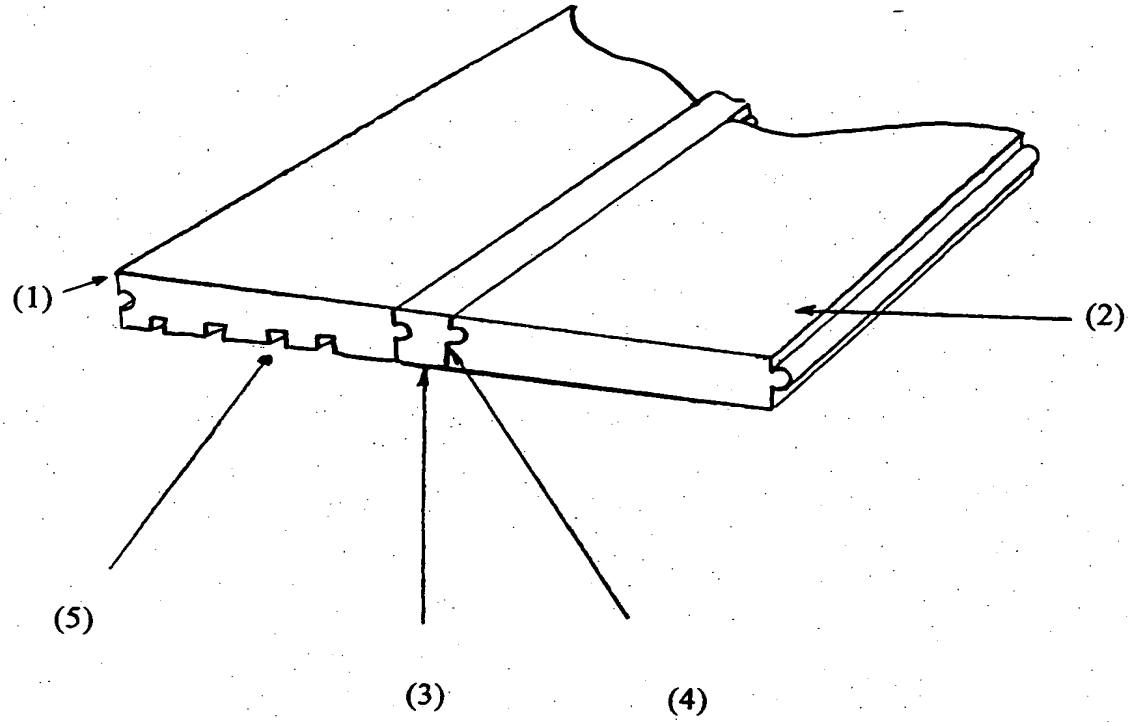


FIG 2.

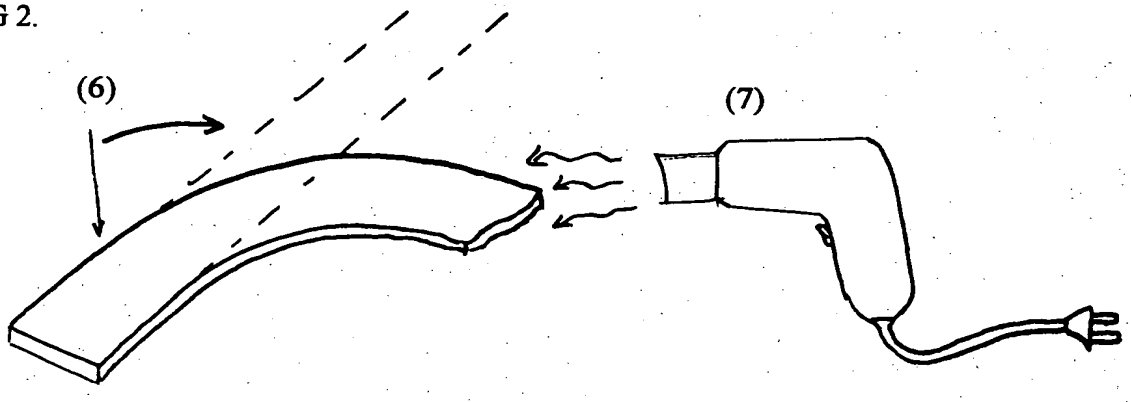
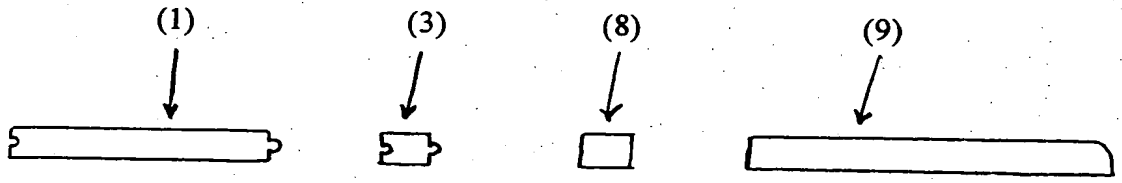


FIG 3.



4.

FIG 4.

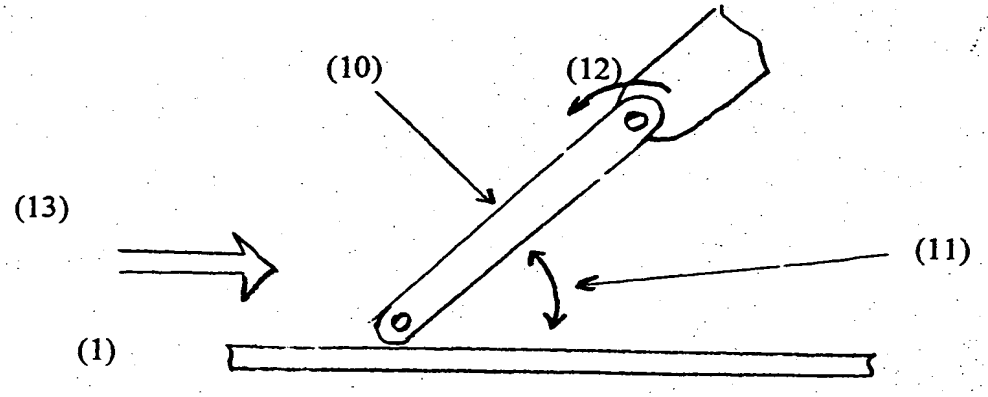


FIG 5.

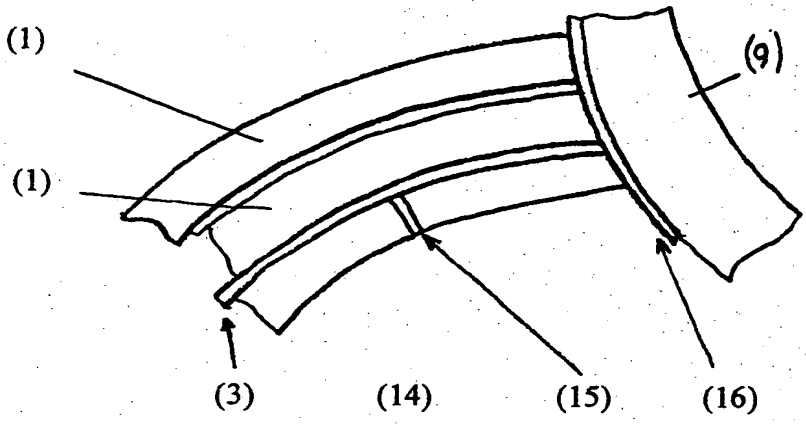
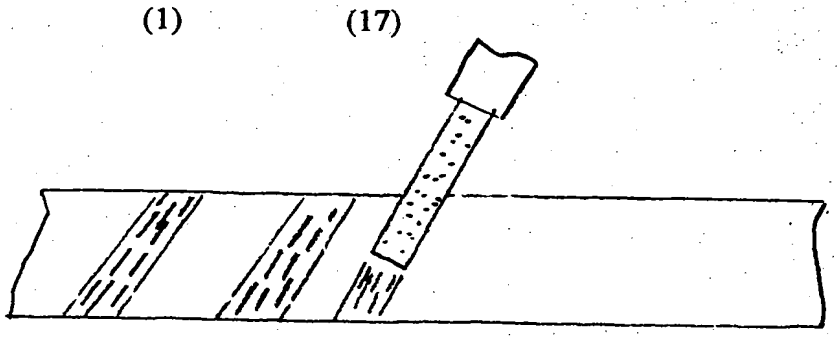


FIG 6.



5.

FIG 7.